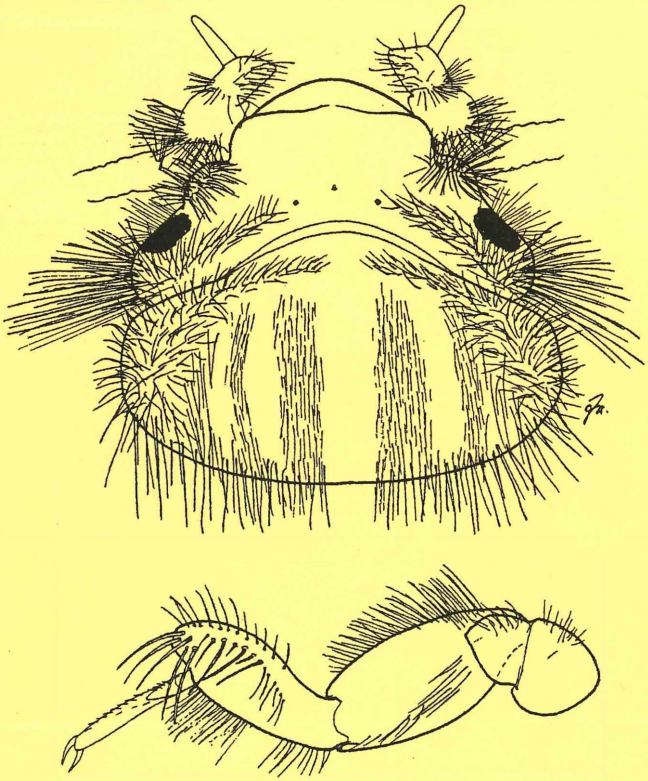
P E R L A

Newsletter and Bibliography
of the
International Society of Plecopterologists



PERLA No. 21, 2003

Aquatic Entomology Laboratory
Department of Biological Sciences
University of North Texas
Denton, Texas 7620

Standing Committee
International Society of Plecopterologists

John Brittain
Zoologisk Museum
University of Oslo, Sarsgt. 1.
N-0562 Oslo, NORWAY

C. G. Froehlich
Department of Biology, Philosophy Faculty
University of Sao Paulo
14049 Ribeirao, Preto, SP, BRAZIL

Peter P. Harper
Département de Sciences biologiques
Université de Montréal
C.P. 6128, Succ. "Centre-Ville"
Montréal, Québec, H3C 3J7, CANADA

T. Kawai
Biological Institute
Nara Women's University
Kitauoya nishi-machi
Nara City, 630 JAPAN

Ian D. McLellan
P. O. Box 95
Westport, NEW ZEALAND

Ignac Sivec
Prirodoslovni Muzej Slovenije
Prevernova 20, POB 290
YU- 61001 Ljubljana, SLOVENIA

Kenneth W. Stewart
Department of Biological Sciences
University of North Texas
Denton, Texas 76203, USA

Stanley W. Szczytko
University of Wisconsin
College of Natural Resources
Stevens Point, Wisconsin 54481, USA

Peter Zwick
Limnologische Fluss-Station
Max-Planck-Institut für Limnologie
Postfach 260
D-36105 Schlitz, GERMANY

COVER ILLUSTRATION

The cover illustration shows the head and pronotum of an antepenultimate instar, about 7 mm long, of *Isoptena serricornis*. Enormous setal tufts cover the tiny eyes and screen off articulations between mouthparts. Long thick setae at the rear edges of the triangular head are used when the larva digs into the sand, while the dense dorsal pilosity may facilitate moving within the sand. The slender weak tarsus is bent backward from its subapical insertion on the tibia. The tibia carries a comb of massive curved spines and is evidently fossorial. The figure shows a fore leg in ventral view.

Biology of *Isoptena* (Chloroperlidae) in focus

Adult *Isoptena serricornis* (Pictet, 1841) are normally-looking yellow chloroperlids, except that their antennae are serrate; hence the name. The species occurs in north and central Europe, mainly in areas with large glacial sand deposits. The exceptionally hairy larvae live deep in moving sand at the stream bottom, allegedly down to a depth of 5 m; no wonder their life is poorly known. MATHIAS HOHMANN discovered a reasonably large population in Sachsen Anhalt, Germany and he and PETER ZWICK are now working on selected aspects of the species' biology. Ready-to-emerge larvae and adults collected May 2002 yielded sufficient egg masses to elucidate the temperature dependence of egg incubation. First and second instar larvae were obtained and will be described. Since May last year, MATHIAS HOHMANN took monthly random samples. In April this year we will seek field confirmation for the life history suggested by plots of larval size against collecting date. We also hope to find out more about the feeding habits of the larvae. Their guts are always strikingly full of large sand grains which already the second instar ingests. Indeed, ash contributes up to 80% of larval dry weight!

Peter Zwick

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PERLA SUBSCRIPTION POLICY

Dues for membership in the International Society of Plecopterologists are $15 U.S. per year. Members will automatically receive PERLA. Libraries or other institutions may receive PERLA by making a $10 annual donation, or through an exchange of publications agreement approved by the Managing Editor and Editorial Board. Five dollars ($5) of the dues will become part of the Scholarship Fund of the Society, to be used for helping active and deserving workers or students participate in future symposia.

Persons or institutions who have no support or are financially unable to pay dues may continue to receive PERLA by writing a brief note to the Managing Editor requesting a waiver of dues and to be retained on the mailing list.

It is therefore important that you respond to this receipt of PERLA 21 in one of the following ways, in order to be kept on the mailing list for PERLA 22: (1) pay your annual dues, (2) make a $10 donation (institutions), or (3) request a waiver. A form and self-addressed envelope are included with this issue, (PERLA 21) for your convenience in responding.

You may send your dues or donation in the form of a personal check, bank note, cashier's check, or postal money order designated in U.S. funds to the Managing Editor. Because of high bank costs for exchange in some countries, you may send cash, in which case the Managing Editor will respond with a personal acknowledgment if it is received.

Dues and donations are used to help pay the costs of publishing and mailing PERLA, for Lifetime Achievement Award plaques presented by the Society at International Symposia and for the Scholarship Fund. The Managing Editor will make a financial report to the International Committee at each International Symposium Business Meeting or at any other time when requested.

Members or institutions whose dues remain unpaid for two consecutive years, or have not been granted exchange, waiver or emeritus status, will be dropped from the PERLA mailing list.

HISTORY OF INTERNATIONAL PLECOPTERA SYMPOSIA

Symposium	Place	Time	Organizer(s)
I.	Lausanne, Switzerland	Sept. 1956	Jaques Aubert
II.	Vienna, Austria (Symposium XIII within Framework of International Congress of Entomology)	Aug. 1960	E. Pomeisl
III.	Ploen, Germany	Sept. 1963	J. Illies
IV.	Abisko, Swedish Lapland	July 1968	P. Brinck & S. Ulfstand
V.	Washington, D.C., USA	Sept. 1974	R.W. Baumann
VI.	Schlitz, Germany	Aug. 1977	J. Illies & P. Zwick
VII.	Nara, Japan	Aug. 1980	Teizi Kawai
VIII.	Toulouse, France	Aug. 1983	C. Berthélemy
IX.	Marysville, Australia	Feb. 1987	Ian Campbell
X.	Granada, Spain	July 1989	J. Alba-Tercedor
XI.	Treehaven Biological Station, Wisconsin, USA.	Aug. 1992	S. W. Szczytko
XII.	Lausanne, Switzerland	Aug. 1995	P. Landolt & M. Sartori
XIII.	Tucumán, Argentina	Aug. 1998	E. Dominguez
XIV.	Perugia, Italy	Aug. 2001	Elda Gaino
XV.	Flathead Lake, Montana, USA	Aug, 2004	J. A. Stanford

PRELIMINARY ANNOUNCEMENT OF THE 2004 JOINT MAYFLY AND STONEFLY MEETINGS

Flathead Lake Biological Station
311 Bio Station Lane
Polson, Montana, U.S.A. 59860-9659
Phone (406) 982-3301
Fax (406) 982-3201
Http://www.umt.edu/biology/flbs

Dear Colleagues:

The faculty and staff of Flathead Lake Biological Station will be pleased to host the 2004 Mayfly-Stonefly conference. FLBS is located on the east shore of Flathead Lake and has facilities to house and feed up to 100 people. We have 40 very nice lakeshore cabins with built-in heating. We also have new college dormitory with 10 rooms and 4 apartments. A number of nice to fancy hotels and dude ranches are located near the station for those that want more ritzy tidings, but you will have to hire a car. We will reserve rooms in some of those hotels for station overflow.

We envision a weeklong event for both the mayfly and stonefly meetings, probably the last week in August. We will generally follow the logistics of previous meetings (e.g., Argentina). We estimate a meeting registration of about $250US per person and a room and board charge of about $450US per person for the entire meeting, including a banquet. All meals will be in our commissary at the station, a very nice facility with a deck over-looking the main lake.

We will have a mid-congress tour to our floodplain research site on the Middle Fork of the Flathead River. Tour cost is included in registration estimate. We have recently been awarded a $2.6M NSF grant to work on biogeochemical cycling and biodiversity relationships on this big gravel-bed flood plain and by 2004 we will be ready to showcase the project. The tour will go also to beautiful sites in Glacier National Park, including the magnificent trail of the cedars and several mountain vistas. Collecting opportunities will be frequent and in a wide variety of habitats.

FLBS is located about a 50 minute drive from the Glacier Park International Airport (Kalispell, MT). This airport is served by 3 major airlines (Northwest, Delta and Alaska) from all directions. The main connecting hubs are Seattle, Salt Lake City and Minneapolis. Our area is growing very fast and we may have even better service by meeting time. We will shuttle participants staying at the Station so you will not need a hire car unless you stay off-Station. Hire cars are available at the airport from all of the major vendors (Avis, Hertz, Budget, etc) but these will have to be booked a year in advance owing to heavy tourism in August.

The Station grounds are spacious (ponderosa pine - grand fir forest) and collecting may be done on the lakeshore and in several local streams. The Station has modern labs and facilities. See our web site for many pictures of the Station and area.

We can have two concurrent sessions for presentation of papers (if needed) and we can have a poster area. Our lecture halls accommodate 100 people and we will facilitate electronic presentations as well as the usual slides. We will plan to publish a peer-reviewed proceeding of both meetings, preferably as a journal issue rather than a book.

Please come to Montata! Jack Stanford

ANNOUNCEMENT of 2003
North American Plecoptera
Society Meeting
7th North American Plecoptera Symposium
6-8 June 2003
Western State College, Gunnison, Colorado USA
General Information

Tentative Schedule:

Thursday night (June 5) – registration, preconference greetings and program on the geology, natural history and culture of the Gunnison country.

There will be information at registration on a spouses and/or accompanying persons program.

Friday (June 6) – symposium papers and posters.

Saturday (June 7) – symposium papers and evening at Rocky Mountain Biological Laboratory.

Sunday (June 8) – Area field trip.-- and possible evening BB

Monday (June 9) – departure and goodbyes.

Location: Western State College, at 7,703', is the highest elevation, four-year college in the United States. Nestled in the Gunnison Valley, the College is within minutes of vast stretches of high country wilderness, sage-brush steppe and a variety of streams. The Sawatch and West Elk ranges of the Rockies shelter Gunnison on the east and west while the Elk and San Juan ranges border it to the north and south. The area provides vast recreational, research and exploration opportunities. In fact, a Western Professor of geology has called the Gunnison Country "one of the world's great natural laboratories."

The beginning of June is a beautiful time of year in the valley with high temperatures typically in the low 70's F (22° C) and the lows in the 30's F (1° C). The days are typically clear and sunny but an occasional rain or show shower is possible.

Nearby activities include a visit to the Black Canyon National Park or the historic mining and ski town of Crested Butte. Trout fishing is available on the world famous Gunnison and Taylor Rivers or at a variety of high elevation streams. Arrangements can be made for guided fly-fishing trips through a local stonefly enthusiast who works as a fishing guide.

This valley has been a center for much research on Plecoptera and should make an exciting setting for the meeting. To complete the meeting we are planning on spending an evening at the Rocky Mountain Biological Laboratory (weather permitting) located in the historic mining town of Gothic, and a day collecting stoneflies at several sites in the Gunnison Basin.

Getting there: Travel to and from Gunnison can be made by automobile on U.S. Highway 50 which passes through some of the most beautiful scenery in the United States. The airport in Gunnison is served by several flights daily from both United and Continental Airlines. Flights into the Gunnison Airport can be expensive at times so if the prices are out of your price range you may want to consider flying into another airport and renting an automobile for the remainder trip.

Approximate drive times from other cities with airports to Gunnison:
Denver International Airport (4 hours)
Montrose, CO (1.5 hours)
Colorado Springs (3.3 hours)
Grand Junction (3 hours)

Lodging: On-campus lodging in the Ute Hall dormitory is available and represents your most economical lodging option. The dorm lodging includes your linens and can be either single or double occupancy.

Off-campus lodging is available through a variety of hotels, motels, bed-n-breakfasts, condominiums, cabins and campgrounds. Information on prices and availability can be found at
http://www.gunnisonchamber.com/availability/lodging.cfm

It is recommended that you stay in Gunnison due to travel times between the location of symposium and surrounding towns. You can send e-mail to kalexander@western.edu for more information and personal recommendations.

Meals: A variety of restaurants can be found in Gunnison and for a short 30-mile drive; Crested Butte offers more selections. The campus cafeteria will be closed during the conference so all meals will be off-campus. Also, there are two supermarkets, City Market and Safeway, where food can be purchased.

Climate and local conditions: The beginning of June is a beautiful time of year in the valley with high temperatures typically in the low 70's F (22°C) and the lows in the 30's F (1°C) but there can be a heavy freeze any night during the summer. The days are typically clear and sunny but an occasional rain or snow shower is possible. It is recommended that you dress in layers and come prepared for a variety of weather conditions.

The region is arid so be prepared for the dryness by drinking plenty of water and the sun is very strong so sunscreen, long sleeves and hats are strongly recommended. Also be aware of altitude sickness which affects many people when they first arrive in Gunnison.

Field Trip and Rocky Mountain Biological Laboratory (RMBL) night. RMBL is the site of world class ecological research and this valley has been a

center for much research on Plecoptera and should make an exciting setting for the meeting. Our field/collecting trip will cover a variety of stream types across a variety of elevations and biomes. You should be able to see and collect a variety of stonefly and other invertebrate species. We can supply a limited amount of collecting equipment and waders for our trip.

For information on your stay at RMBL please see the attached information that they provided to assist in your stay.

For additional information or if you have questions, please contact:

Kevin D. Alexander, Ph.D.
Department of Natural and Environmental Sciences
Western State College
Gunnison, CO 81231
E-mail: kalexander@western.edu
Telephone: 970.943.3405

7th North American Plecoptera Symposium
6-8 June 2003
Western State College, Gunnison, Colorado USA
Call for Papers

We are planning on an introductory session on Thursday night to introduce symposium participants to the geology, natural history and culture of the Gunnison country. We will then have two sessions on Friday, June 7 and one on Saturday, June 8. The symposium will then move to the Rocky Mountain Biological Laboratory (www.rmbl.org) on Saturday night for a dinner and evening program. The symposium will conclude on Sunday with a field trip to local collecting sites.

Abstract Format for Papers and Posters
Please submit abstracts as MS Word or Wordperfect files in 12 point, Times New Roman font, left justified only, and include the following:

a. A brief yet descriptive title.
b. A list of all authors and their addresses.
c. An abstract of 300 words or less.
d. A clear indication of preference for poster or oral presentation.
e. Poster size is flexible. Please indicate space needed.

Abstract example:

Title: Stoneflies of the Great Basin: history and biogeography.

Author: Andrew Sheldon, Biological Sciences, University of Montana, Missoula, MT 59819.

Abstract: This statement will be used to evaluate selection for sections within the symposium. Problem statement, significance, objectives, findings and conclusions should be relayed in 300 words or less.

Preference: oral presentation

Other Activities or Presentations

We are flexible and welcome other activities or presentations that you feel would be beneficial to the symposium. Please contact us individually with any suggestions. Possible activities include: workshop, computer simulation/demonstration, new techniques demonstration, etc.

Please submit abstracts to:

Kalexander@western.edu (Preferred method referencing NAPS in the subject line.) OrKevin Alexander/NAPS meeting
Department of Natural and Environmental Sciences
Western State College
Gunnison, CO 81231

7th North American Plecoptera Symposium
6-8 June 2003
Western State College, Gunnison, Colorado USA
Registration

Name:_____

Address:_____

_____

City: _____**State:** _____

Zip: _____ **Country**:_____

Telephone: _____

Fax: _____

E-mail (for confirmation and announcements):

_____

Registration Fees = $75 (current University students and accompanying spouses $25.)

1. admits 1 to the conference.
2. snacks and beverages during conference.
3. conference program.
4. Symposium field trip on June 8.

Check all of the following that apply:

____ I will present a poster.

____ I will give an oral presentation.
Media requirements: ___ Powerpoint, ___ Slides, ___Overhead, ___ Other (please list):

___ Overnight at Rocky Mountain Biological Laboratories (RMBL) in Gothic, CO = **$50**

a. includes overnight stay at Rocky Mountain Biological Laboratory (1/7) and evening program.
b. includes dinner on June 7 and breakfast on June 8.
c. van transportation to RMBL and on collecting trip.
d. station fees at RMBL.
e. You must bring a sleeping bag and/or linens. Please dress for cold/cool weather.

____ On-Campus Lodging = **$47** (double occupancy)
Roommate:_____
____ On-Campus Lodging = **$60** (single occupancy)

a. includes housing in a campus dorm on the nights of **June 5, 6 and 8.**
b. Includes all linens.
c. Check in during registration on June 5 and checkout 8-10 a.m. June 9

____ I will make my own arrangements for lodging. See lodging on general information page.

____ I will attend the symposium field trip. (including # persons accompanying me_____).

Please mail checks and registration materials to:
Kevin Alexander/NAPS meeting
Department of Natural and Environmental Sciences
Western State College
Gunnison, CO 81231

History of RMBL and Gothic, CO

For a brief time in the latter part of the 19th century Gothic became such a well-known boisterous mining town that in 1880 Ex-President Ulysses S. Grant came for a personal visit. The excitement began in May 1879 when brothers John and David Jennings discovered a rich silver lode at nearby Sylvanite Basin. Hundreds of eager prospectors rushed to the area, seeking their own quick riches. By August "Gothic City" was officially organized. Along its streets quickly appeared numerous log and frame residences, two hotels, three restaurants, several saloons, two general stores, a school, law and medical offices, a bank, two saw mills, other merchants' buildings, and a post office. Yet, as revealed in Gothic's newspaper, The Gothic Miner, the feverish venture effectively lasted for little more than two years because it became evident that too few diggings yielded ore rich enough for processing.

Gothic's decline started in the summer of 1881 and, although the town government lived on for a time, it was virtually abandoned by 1890. From then until 1928 few people remained. The notable exception was the colorful Garwood Hall Judd --"The Man Who Stayed"-- who until his death in 1930 was the wily self-appointed Gothic caretaker. Seeing chance for Gothic's revival, Judd played a key role in aiding Dr. John C. Johnson, Founder of the Rocky Mountain Biological Laboratory (RMBL), in obtaining personal title to part of the abandoned townsite.

Dr. Johnson, then Professor of Biology and Dean at Western State College (WSC) in Gunnison, first saw Gothic in July 1919. From then through 1927 he regularly took college biology students on overnight field trips to Gothic. During those years he became convinced not only that a high-altitude field station was needed, but also that Gothic, with its abundant diverse biota and spectacular location, would be the ideal site.

Since Colorado's political climate at the time barred WSC from providing support, Dr. Johnson went ahead on his own. By 1928 he had persuaded Dr. A. O. Weese and Dr. Aute Richards of the University of Oklahoma, and Dr. L. A. Adams of the University of Illinois, to join him and his wife, Vera, in forming RMBL, an independent Colorado Corporation. He assumed all initial financial responsibility and turned over his Gothic properties to the promising new institution that later acquired additional land. RMBL's first session began in June 1928.

The dilapidated Gothic Hotel and several other ancient buildings remaining from the silver-mining days were repaired and used in RMBL's earliest years until new residences, classrooms, laboratories, and service buildings could be constructed. Three buildings from the 1880s, including the old Gothic Town Hall (now the Gothic Store), and two from about 1910, have been preserved.

During the following years, with essential aid from family and numerous devoted scientists, and with strong support of many persons in Crested Butte and Gunnison, Dr. Johnson, Director of RMBL for its first thirty years, built its instructional and research programs while improving its physical facilities. Students and prominent biologists from all over the United States and other countries come to Gothic to study and gather research data concerning the biota within the area's unique ecosystems. Through the

substantial contributions of many outstanding scientists, RMBL continues to grow in academic stature.
Now in its 75th year, RMBL has become a renowned high-altitude field station dedicated to excellence in biological education and research

General Information

Housing

Housing at the RMBL is rustic. The nights can be very cold so we suggest warm sleeping bags (see below). In early June there should be running water in the cabins, but we cannot guarantee it. While not all cabins have running water, there is a shared bathhouse (which should also be open). Most of the cabins will have wood stoves. If you do not know how to build a fire properly in your wood stove please ask for help. Your first fire should be small in case of a problem in the stove or stovepipe. Do not use anything but paper and kindling to start fires.

Suggested Personal Items

Listed below are some personal items you should bring with you to Gothic .

d. sleeping bag comfort rated to at least 20 degrees F (we provide a cot and pillow)
e. sleeping pad (makes the cots much warmer)
f. broken-in, waterproof hiking boots
g. toilet articles (including towels)
h. flashlight
i. rainwear
j. warm outer clothes, including gloves and a hat
k. day pack
l. sunscreen
m. alarm clock
n. sunglasses
o. water bottle

Suggestions

When deciding on clothes to bring to Gothic consider the climate and rustic conditions. Casual and rugged clothes are the rule. Expect some rainy days, but also remember how strong the sun's rays can be at 9500' elevation. During the day it can be as warm as 75 degrees, but once the sun goes down it cools off rapidly, and can freeze any night of the summer. The most successful way of dressing is in layers so you can keep up with the rapidly changing weather.

If you wear contact lenses you should be prepared for the possibility that your eyes will be too dry to be comfortable with your lenses. At our elevation the humidity is very low, and our roads are unpaved and dusty. Be sure to bring extra eyeglasses just in case. You will also notice that the air dries out your nose, lips and skin so consider bringing some moisturizers and lubricants, like Vaseline and lip care products.

Altitude Sickness

Some people experience nausea, fatigue, dizziness, insomnia and/or headache when they first get to RMBL's 9,500ft. The best way to combat altitude sickness is to take it easy and drink more water than you've ever drunk in your life. You should avoid drinking caffeine, alcohol and sugary drinks during these first few days. If you get headaches, you can take aspirin or ibuprofen. Remember to drink lots of water even after the altitude sickness wears off.

Altitude sickness can obviously be induced and exacerbated by mountain climbing. The following symptoms are signs of life-threatening altitude sickness. If you experience any of them, you must descend in elevation immediately and seek medical help. They are persistent headache (that isn't relieved by pain killers), persistent vomiting, altered mental status or coughing up fluid from your lungs. Fluid in the lungs is also a symptom of possible Hantavirus infection. So in either case, you should see a doctor.

Meals

We generally have dinner 6-7 pm and breakfast 7-7:30.

Phones

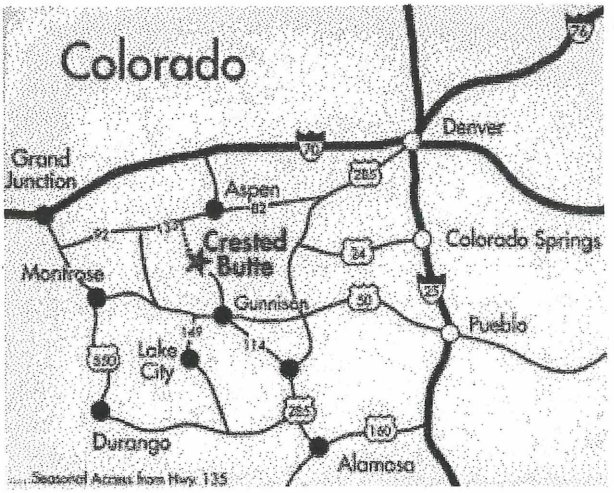
There will be a pay phone available. If anyone needs to have a message left for them, the number is 970 349 7481.

Pets

No pets of any kind are allowed within the Gothic townsite. Dogs may be walked on the county road through Gothic but not on RMBL property. Dogs should be under owner control at all times to avoid disturbing animals in town (e. g., marmots and ground squirrels) that are the subject of research by Lab investigators.

Smoking

Smoking is not allowed inside any building at RMBL. Please distinquish your smoking materials thoroughly and dispose of them in proper containers. Be aware that smoking bans exist during high fire danger periods.



History of North American Plecoptera Society Mettings

The North American Plecoptera Society has met in symposia every three years since 1985. The meetings have preceeded by one year the Symposia of the International Society, which also meets every three years.

Symposium	Place	Date	Organizer
I.	Sacramento, CA California State U.	June 18-20, 1985	Bill Shepard
II.	Clinton, MS Mississippi College	May, 1988	Bill P. Stark
III.	Ft. Collins, CO Colorado. State U.	May 17-19, 1991	Boris C. Kondratieff
IV.	Chatanooga, TN U. of Tennessee	May, 1994	Charles H. Nelson
V.	Montreal, Quebec CA U. of Montreal	June 6-8, 1997	Peter P. Harper
VI.	Provo, UT Brigham Young U.	May 24-27, 2000	Richard Baumann C. Riley Nelson
VII.	Gunnison, CO Western State College	June 6-8, 2003	Kevin Alexander

Stoneflies (Plecoptera) of Fort Sill, Oklahoma, U.S.A.

B. C. Kondratieff[1] and R. E. Zuellig[2]

[1]Department of Bioagricultural Sciences
and Pest Management
[2]Department of Fishery and Wildlife Management
Colorado State University
Fort Collins, Colorado 80523

The stoneflies of Oklahoma, U.S.A. are relatively well known (Stark and Stewart 1973a, 1973b, Stewart et al. 1974, and Poulton and Stewart 1991). The majority of the published stonefly records are from the Ozark-Ouachita Mountains in the eastern part of the state. Relatively few records have been reported from the southwestern region of the state. This area of the Osage Plains and Central Lowlands physiographic province (Hunt 1974) are characterized by often sluggish, sandy- bottomed silt laden streams that have been substantially impacted by poor agricultural practices.

A survey of the stoneflies of Fort Sill, a 38,300 ha military reservation provided an opportunity to sample stoneflies in southwestern Oklahoma. Previously, from Fort Sill, only unidentified species of *Perlesta* sp. and *Neoperla* sp. were recorded (Vaughn and Obermeyer 2002).

Methods and Materials

Study Site

Fort Sill Military Reservation is located in Comanche County in southwestern Oklahoma, approximately 160 km southeast of Oklahoma City. The City of Lawton is located on the south side of Fort Sill, and the Wichita Mountains National Wildlife Refuge borders Fort Sill at its northern and western boundary. Fort Sill extending 37 km east west and 13 km north south at the widest points. The eastern and southwestern portions are rolling upland grasslands, whereas the southeastern end of the Wichita Mountains extends into the northwestern and central portion of Fort Sill. Elevations of these hilly and rocky slopes range from 329 m on East Cache Creek to 673 m on Mt. Sherman. The rolling grasslands are developed on Permian Redbeds, red shales and sandstones with intercalated layers of gypsum. The Wichita Mountains and associated elevated areas consist of a

Pre-Cambrian crystalline igneous core surrounded by outcrops of Paleozoic sediments of limestone and sandstone.

Summers are long, with days reaching 43°C or higher (Curry 1970), and with at least 100 days above 32°C. Winters are considered short and mild with temperatures rarely reaching –18°C. Mean annual precipitation is 79 cm, mostly falling as rain. This region exhibits some of the most severe water and wind erosion in the United States (Baumgartner and Baumgartner 1992). Extended droughts are not uncommon.

Two major drainages traverse the western portion of Fort Sill, West Cache Creek and Medicine Creek; East Cache Creek drains the eastern side (Fig. 1). These are tributaries of the Red River, which forms the political boundary between Oklahoma and Texas. These streams and their tributaries are often flashy during precipitation events, and some become intermittent or dry during summer and fall.

Standard techniques were used to collected stoneflies, including beating sheets, sweeping, light traps, handpicking, and rearing during 2002 and winter of 2003.

Results and Discussion

Six species of stoneflies are known from Fort Sill (Table 1). All these taxa are common regional species. Stark and Stewart (1973a) and Stewart et al. (1974) previously reported four of these species from Comanche County, Oklahoma: *Allocapnia granulata* (Claassen), *Zealeuctra claasseni* (Frison), *Taeniopteryx burksi* Ricker and Ross and *Hydroperla crosbyi* (Needham and Claassen). *Perlesta decipiens* (Walsh), and *Neoperla* sp. are apparently new county records. The streams of the Wichita Mountains region of Fort Sill are very different from the more deeply incised silted streams of the eastern rolling grasslands of Fort Sill. *Allocapnia granulata* and *Zealeuctra claasseni* occur in almost every small tributary of West Cache Creek and Medicine Creek. These become intermittent or completely dry in late summer and fall. *Allocapnia granulata*, *Taeniopteryx burksi*, and *H. crosbyi* also occur in the permanent larger streams of the eastern portion of Fort Sill. Sixty-six percent of the stoneflies of Fort Sill are cold or cool season species, emerging in the winter or early spring. *Perlesta decipiens* and *Neoperla* sp. emerge in the summer months. Other common regional summer taxa such as *Acroneuria* are apparently absent. As Poulton and Stewart (1991) have indicated, the intermittent streams are characterized by a few species adapted to the regional hydrological cycles. Additionally, *A. granulata, Z. claasseni,* and *Taeniopteryx burksi* occur in the streams of Fort Sill and few other streams of southwestern Oklahoma as isolated populations from their principal eastern ranges (Stewart et al. 1974).

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Table 1. Annotated list of stonefly species collected from Fort Sill, Comanche County, Oklahoma. BCK = Boris Kondratieff, REZ = Robert E. Zuellig, JAS = Jason A. Schmidt, OBS = Oklahoma Biological Survey.

Taxa	Stream								Date	Collectors
	Blue Beaver Crk.	Cache Crk.	East Cache Crk.	West Cache Crk.	Medicine Crk.	Quanah Crk.	Rock Crk.	Post Oak Crk.		
Allocapnia granulata (Claassen)	X	X		X	X	X	X		5-Feb-03	BCK, REZ, JAS
Perlesta decipiens (Walsh)		X	X		X			X	11-14 June2002	BCK, JAS, OBS
Neoperla sp.	X								May-00	OBS
Hydroperla crosbyi (Needham and Claassen)	X		X	X					5-Feb-03	BCK, REZ, JAS
Zealeuctra claasseni (Frison)	X			X	X	X			5-Feb-03	BCK, REZ, JAS
Taeniopteryx burksi Ross and Ricker				X	X				5-Feb-03	BCK, REZ, JAS

Figure 1

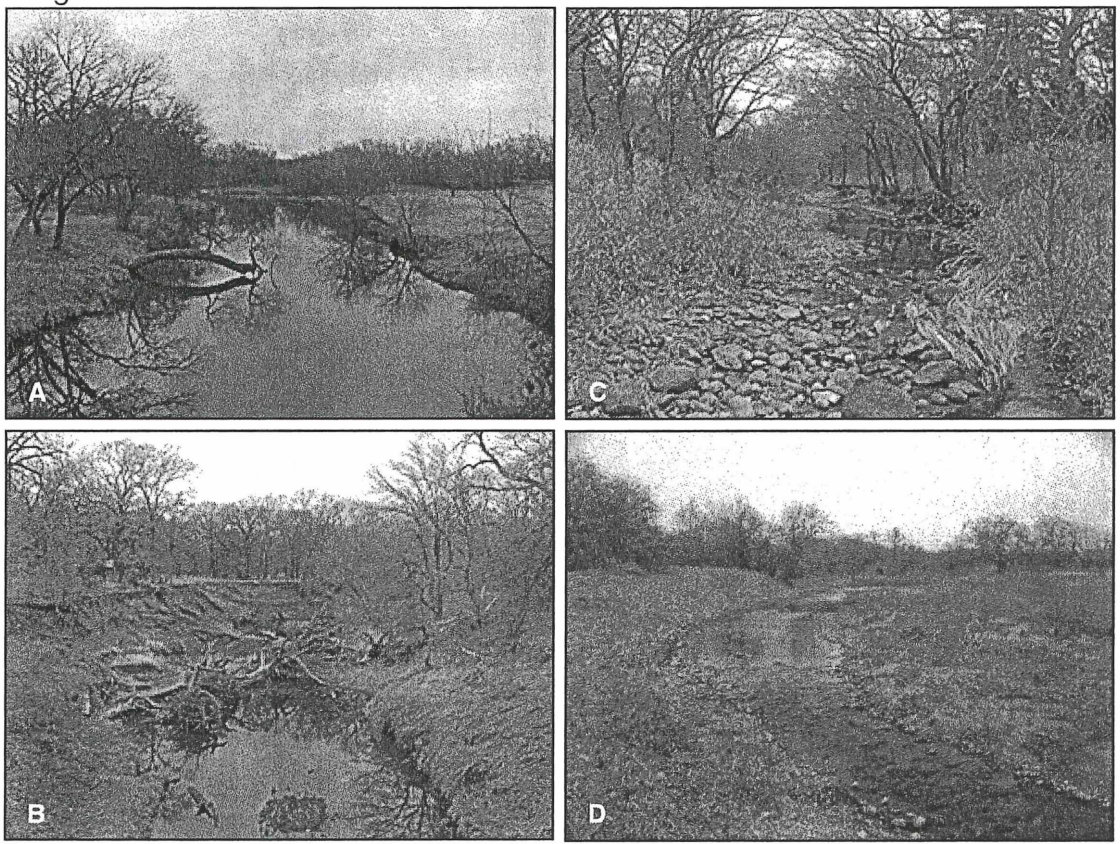

Figure 1. Photos showing typical views seen along Medicine Creek (A), East Cache Creek (B), Quanah Creek (C), and Blue Beaver Creek (D), Fort Sill, Comanche County, Oklahoma.

CALL FOR APPLICATION FOR SCHOLARSHIP FOR MONTANA, USA, 2004

Plecopterologists who have limited or no institutional support, need financial assistance, and would like to attend and present a paper at the next symposium in Montana in the year 2004 (see announcement elsewhere in this issue) may send a letter of application for a scholarship to Peter Zwick (address on inside front or back cover), providing the following information:

1. Name and age.
2. Mailing address (including fax and/or e-mail)
3. Affiliation and current position.
4. Title and summary of proposed presentation.
5. A resume and list of publications.
6. Approximate amount of financial support needed (include information on any personal or other commitment to the travel expense).

International Committee Selection Criteria will be financial need, potential contribution to the symposium and to professional development of the applicant and geographical location of the applicant. Application deadline is September 30, 2003.

CALL FOR SCHOLARSHIP DONATIONS

Decision in Tucumán by the Standing Committee to increase dues to $15.00, and allocate the increase ($5.00) to a Scholarship Fund of the Society (see Subscription Policy on Previous page and announcement in Perla 18) should contribute to helping active and deserving workers or students to participate in future symposia.

However, increasing costs of travel and expense involved in traveling internationally indicate that scholarship support of the full expense of participation may not be possible. Therefore, to maximize the amount of scholarship support that the Society will be able to provide to any one or more recipients, we solicit any consideration members might give to making a donation to the Scholarship Fund to Peter Zwick, Corresponding Secretary of the Society; address inside cover of the PERLA. We would like some Committment of your support by November 30, 2003.

CALL FOR PROPOSALS TO HOST AND ORGANIZE JOINT INTERNATIONAL MEETING OF MAYFLY AND STONEFLY WORKERS FOR THE YEAR 2007

The representatives from the International Conferences on Ephemeroptera and the International Society of Plecopterologists agreed, during the joint business meeting on 9 August 2001 in Perugia, that there should be a set of guidelines for submitting proposals to host conferences. Peter Zwick, Michel Sartori, and Peter Grant were appointed to prepare these guidelines.

Preliminary Proposals

Preliminary proposals to host a conference may be submitted six years prior to the year of the proposed conference, but a final vote on the conference site will not be made until three years prior to the actual conference date.

Final Proposals

1. Proposals should be submitted at least one month prior to the conference during which the proposal will be officially presented. (by July 15, 2004 for the upcoming conference).

2. A copy of this proposal should be sent to the chair of each committee - International Conferences on Ephemeroptera and the International Society of Plecopterologishts. (for stonefly organizers to Peter Zwick, address on inside cover of this Perla).

3. Proposals should be submitted by email. This facilitates distribution of the proposal to the members of the two committees.

4. Proposals should contain detailed information regarding plans to host the conference.

CURRENT RESEARCH ON PLECOPTERA

This section is intended to keep society members current on research in progress by other members, workers and students. Please use Editor Stewart's e-mail address (inside front cover) or conventional mail to submit a brief, informative description of your current work, for the next PERLA (22).

Richard Baumann, Brigham Young University–

1. Revision of the genus *Lednia* in the family Nemouridae with Boris Kondratieff.
2. Survey of the stoneflies of the Columbia River Gorge in Oregon and Washington with Gene Fiala of Gersham, Oregon.
3. Study of the Nemouridae of Mexico, with an emphasis on the genus *Amphinemura* with Boris Kondratieff.
4. Revision on the genus *Malenka* in the family Nemouridae with Boris Kondratieff.

These research projects are now in progress and will be completed in the approximate order that they are listed. My goal is to complete these studies before my projected retirement in July, 2006. In addition, I have several other commitments to patient colleagues that need to be completed soon.

If anyone has specimens of the above genera, please send them to the following address so that they can be included in these revisions. I am especially anxious to study all specimens that have been or will be collected anywhere in the Columbia River Gorge. All specimens will be well cared for and returned or deposited to the collection of your choice.

Thanks,

Richard Baumann
Monte L. Bean Life Science Museum
Brigham Young University
Provo, Utah 84602

Stanley W. Szczytko, University of Wisconsin, Stevens Point, is near completion of a revision of the genus *Isoperla* of eastern North America, and he and Ken Stewart are continuing a project with the goal of rearing and describing the nymphs of all western North America *Isoperla* species. The only western species nymph left undescribed is *I. gravitans*. Stan is also evaluating the water quality of Wisconsin streams, using macroinvertebrates as a bioassessment tool.

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Boris C. Kondratieff, Colorado State University –
Dr. Bill P. Stark and I have completed a manuscript on the perlid genus *Anacroneuria* of Mexico and Upper Mesoamerica. In this treatment, 38 species are recognized from Mexico, Belize, Guatemala, Honduras and Nicaragua. Fifteen are described as new.

If anyone has material of this genus from the above listed countries, we would be happy to identify them.

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Jane Earle, Pennsylvania Department of Environmental Protection, is continuing her studies of Pennsylvania stoneflies with emphasis on distribution, habitat preferences, and pollution tolerance, especially of coal mine drainage and acid precipitation. She is updating the PA species list. Current collection efforts are in the Potomac River basin of southcentral PA and in the Poconos of northeastern PA. She has also been identifying specimens from the Academy of Natural Science of Philadelphia, collected from eastern Pennsylvania and the New Jersey Pinelands.

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Jerry Jacobi has finished a checklist of N.M. Plecoptera (with Dick Baumann) except for a few lines of text. He will continue sampling temporary and other streams in the southwest (New Mexico and Arizona).
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Kenneth W. Stewart, University of North Texas –

Doctoral student John Sandberg is near completion of his study of the systematics, drumming behavior and ecology of the stonefly genus *Isogenoides*.

Other projects:

1. Ken and Stan Szczytko have reared *Isoperla tilasqua* from Oregon and a new species of *Isoperla* soon to be described.
2. Ken and Mark Oswood will complete a manuscript for a book "Stoneflies of Alaska and Northwestern Canada" in 2003. The project has been ongoing since 1980.

Bill Stark, Mississippi College, is continuing his studies of *Anacroneuria* and other Perlidae. He and Boris Kondratieff are working on a manuscript of *Anacroneuria* of Upper Meso-America (Belize, Guatemala, Honduras, Mexico). Bill is also working on *Anacroneuria* of Bolivia and Peru and Perlidae of Vietnam.

ANNOUNCEMENTS

Elda Gaino,, organizer of the 2001 International Joint Meeting of mayfly and stonefly workers in Perugia, Italy, is trying to get the Proceedings of that meeting published by the end of 2003. Delay is because some referees are slow to respond and authors are slow to return corrected proofs.

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The 2nd Edition of "Nymphs of North American Stonefly Genera (Plecoptera)" by Kenneth W. Stewart and Bill P. Stark has been published by Caddis Press. Inquiries and purchases can be directed to Brian Armitage, Editor, The Caddis Press, P.O. Box 21039, Columbus, OH 43221-0039. <barmitag@columbus.rr.com>.

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Plecoptera and Ephemeroptera papers available!

Recently the Entomology Section at the National Museum of Natural History has obtained large numbers of back separates from The Biological Society of Washington, these include a few papers on stoneflies and mayflies. In an effort to reduce these quantities of these and a few other papers, we call attention to workers on these orders of their free availability. They are:

Baumann. 1974. What is Alloperla imbecilla (Say)?.... Proc.Bio.Soc.Wash, 87:257-264.

Baumann. 1976. A report on the fifth international symposium on Plecoptera. Proc.Bio.Soc.Wash, 88:399-428.

Baumann. 1975. Revision of the stonefly family Nemouridae.... Smiths. Contrib. Zool., 211.

Edmunds. 1948. A new genus of mayflies from western North America. Proc. Bio. Soc. Wash. 61:141-148

Needham. 1905. New genera and species of Perlidae. Proc. Bio. Soc. Wash. 18:107-110.

Petera. 1971. A revision of the Leptophlebiidae of the West Indies. Smiths. Contrib. Zool. 62

Write, e-mail (<flint.oliver@nmnh.si.edu>) or Fax 202-786-2894 Oliver
Flint if you are interested in any of these papers. Be sure to include your address.
Oliver Flint, Entomology -MRC 169, National Museum of Natural History, PO Box 37012, Washington, DC 20013-7012

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The subscription form sent out with PERLA 20 contained a survey on whether society members would in the near future prefer to receive PERLA as a hard copy, electronic version or no preference. All subscribers returning the form indicated they preferred to continue receiving a hard, printed copy.
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In the above photo, Eric Ricker presents an enlarged and suitably framed and captioned picture of his father, Bill Ricker, "the stonefly collector" to Dr. Laura Richards, Acting Regional Director of west coast fisheries research operations of Canada. The picture, presented in May, 2002, will be on permanent display at the Pacific Biological Station in Nanaimo, B.C., Canada.

RECENT PLECOPTERA LITERATURE (CALENDER YEAR 2002 AND EARLIER)

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AGUERO-PELEGRIN, M.; FERRERAS-ROMERO, M. (2002): The life cycle of *Guadalgenus franzi* (Aubert, 1963) (Plecoptera: Perlodidae) in the Sierra Morena Mountains (southern Spain): Semivoltinism in seasonal streams of the Mediterranean Basin. – Aquatic Insects 24: 237-245.

AGUIAR, F.C.; FERREIRA, M.T. (2002): Relative influence of environmental variables on macroinvertebrate assemblages from Iberian basin. – J. N. Amer. Benthol. Soc. 21: 43-53.

ALBA-TERCEDOR, J.; TIERNO DE FIGUEROA, J.M (2002): Necrológica /Obituary. In memoriam Antonino Sánchez Ortega (1957-2002). – Graellsia 58: 91-96.

ANDRIKOVICS, S.; MURANYI, D. (2001): A checklist of stoneflies with remarks of published, undocumented species. – Folia-Entomol.-Hungarica 62: 23-35.

BAUMANN; R W.; JACOBI, G.Z. (2002): *Capnia caryi*, an interesting new species of winter stonefly from the American Southwest (Plecoptera: Capniidae). – Western North American Naturalist. 62(4): 484-486.

BEAMISH, R. J . (2002): William Edwin Ricker OC, FRSC, LLD, DSc. – J.Fish Biol. 60(2): Obituary.

BELANGER, S.E.; BOWLING, J.W.; LEE, D.M.; LEBLANC, E.M.; KERR, K.M.; McAVOY, D.C.; CHRISTMAN, S.C.; DAVIDSON, D.H. (2002): Integration of aquatic fate and ecological responses to linear alkyl benzene sulfonate (LAS) in model stream ecosystems. – Ecotoxicol. Environ. Safety 52: 150-171.

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BLASIUS, B.J.; MERRITT, R.W. (2002): Field and laboratory investigations on the effects of road salt (NaCl) on stream macroinvertebrate communities. – Environ. Pollution 120(2): 219-231.

BÖTTGER, K. (2001): Biodiversität in einem naturnahen, mit einem Seeabfluß beginnenden Bach des Norddeutschen Tieflandes (Unterer Schierenseebach, Schleswig Holstein). Eine ökologisch kommentierte Zusammenstellung der bislang nachgewiesenen Pflanzen- und Tierarten. [Biodiversity in a near-to-natural lake outlet of the north German lowland (Unterer Schierenseebach, Schleswig Holstein). An with ecologically commented listing of the hitherto recorded plant and animal species]. – Faunistisch-Ökologische Mitteilungen Univ. Kiel. Suppl. 30: 1-79.

BRAASCH, D. (2002): *Isoperla difformis* (Klapálek, 1909) in Mecklenburg-Vorpommern (Plecoptera). [*Isoperla difformis* (Klapálek, 1909) in Mecklenburg-Vorpommern (Plecoptera)]. – Ent. Nachr. Ber. 46: 126.

BRADDY, S.J.; BRIGGS, D.E.G. (2002): New lower Permian nonmarine arthropod trace fossils from New Mexico and South Africa. - J. Paleontol. 76(3): 546-557.

BRADLEY, C.M.; KELLY-QUINN, M.; TIERNEY, D.; MURRAY, D.A.; ASHE, P.J. (2002): Preliminary analysis of the longitudinal patterns occurring in macroinvertebrate assemblages in river catchments in Ireland. – Verh. Intern. Verein. Limnol. 28: 1576-1580.

BRADLEY, D.C.; ORMEROD, S.J. (2002): Long-term effects of catchment liming on invertebrates in upland streams. – Freshwat. Biol. 47: 161-171.

BRAUNS, M.W.; OFFINGER, W. (2002): Bemerkenswerte Nachweise von Wasserinsekten (Ephemeroptera, Coleoptera, Trichoptera) aus dem Nordharz, Sachsen-Anhalt. [Noteworthy records of aquatic insects (Ephemeroptera, Coleoptera, Trichoptera) from the northern Harz Mts, Sachsen-Anhalt]. – Lauterbornia 44: 73-82.

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